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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,621	02/27/2004	Christopher J. Kowalsky	DKT03160	6497

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BORGWARNER INC.
PATENT DEPARTMENT
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EXAMINER

BONCK, RODNEY H

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/788,621

Applicant(s)

KOWALSKY ET AL.

Examiner

Rodney H. Bonck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,11-15 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,11-15 and 18-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following action is in response to the amendment received August 15, 2005.

Drawings

The replacement sheet of drawings showing a corrected Fig. 3 was received on August 15, 2005. These replacement sheet is acceptable.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1, 3-7, and 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1 there is no antecedent basis for "said second piston." The intended scope of claim 18 cannot be determined because it depends from a canceled claim. For purposes of examination, it is assumed claim 18 has been treated as if it depended from claim 15.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 5-8, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bansbach et al.('338) in view of Maehara et al.('407). The Bansbach et al. device is a unitary electrohydraulic clutch assembly comprising an input member 30 and a coaxially disposed output member 52 defining an axis. Bidirectional electric motor 92 drives gear train 94 has an input driven by the motor, and a ball screw 100 is driven by the gear train 94 and drives a first piston 118 displacing hydraulic fluid. Annular slave piston 82 is disposed on the axis and is translated by the hydraulic pressure, and friction clutch 70 is disposed on the axis and is actuated by the annular slave piston. The Bansbach et al. device does not appear to disclose a means for inhibiting back driving of the motor. The Maehara et al. device shows an electric motor 2200 (Fig. 12) for moving a first piston 2370 to displace hydraulic fluid that translates a piston in actuator 40 of clutch 30. Maehara et al. teach providing a means 3100 for

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inhibiting back driving of the electric motor 2200 and having an output 3002. It would have been obvious to provide a means for inhibiting back driving of the motor 92 in Bansbach et al., as taught by Maehara et al., the motivation being to make it unnecessary to constantly apply pressure to maintain clutch engagement. The inhibiting means of Maehara et al. includes a wrap spring 3100 disposed in a cylindrical passageway and extending between a motor output hub 3001 and the inhibiting means output 3002. Maehara et al. further disclosed controller 50 which would logically be a microprocessor. In Bansbach et al., the friction clutch pack 70 includes first and second interleaved clutch plates and a circular apply plate 76 and a thrust bearing 128 disposed between piston 82 and the clutch pack.

Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bansbach et al.('338) in view of Maehara et al.('407) as applied to claims 1, 3, 5-8, and 12-14 above, and further in view of Shaw et al.(US 2002/0162328 A1). The Bansbach et al. device does not appear to disclose a pressure sensor, as called for in these claims. The Shaw et al. device discloses an electric motor-actuated master cylinder/slave cylinder arrangement wherein a pressure sensor 174 is provided to sense pressure in the output line to the slave cylinder. It would have been obvious to carry this teaching to Bansbach et al. as modified in view of Maehara et al., providing a pressure sensor therein for the purpose of protecting the system from overpressure.

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Claims 15, 18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bansbach et al.('338) in view of Maehara et al.('407) as applied to claims 1, 3, 5-8, and 12-14 above, and further in view of Takeyama('546). In Bansbach et al., the electric motor drives single pinion 114 that in turn drives one large spur gear 112. To a person having ordinary skill in this art, however, it would have been obvious vary the gear arrangement depending on the amount of speed reduction desired.

Takeyama discloses a bidirectional electric motor driving a master cylinder through a gear reduction unit including two pinions 27 and 23a and two larger spur gears 23b and 18. it would have been within the skill of the artisan to use a gearing arrangement such as that of Takeyama in the device of Bansbach et al., the motivation being to achieve a particular speed reduction.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bansbach et al.('338) in view of Maehara et al.('407) and Takeyama('546) as applied to claims 15, 18, and 20-22 above, and in further view of Shaw et al.(US 2002/0162328 A1). As noted above, the Bansbach et al. device does not appear to disclose a pressure sensor, as called for in these claims. The Shaw et al. device discloses an electric motor-actuated master cylinder/slave cylinder arrangement wherein a pressure sensor 174 is provided to sense pressure in the output line to the slave cylinder. It would have been obvious to carry this teaching to Bansbach et al. as modified in view of Maehara et al. and Takeyama, providing a pressure sensor therein for the purpose of protecting the system from overpressure.

Response to Arguments

Applicant's arguments with respect to claims 1, 3-8, 11-15, and 18-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney H. Bonck whose telephone number is (571)

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272-7089. The examiner can normally be reached on Monday-Friday 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rodney H. Bonck
Primary Examiner
Art Unit 3681

rhb
September 22, 2005

FIG. 3